

ABSTRACT OF THE DISCLOSURE

This invention relates to a method for manufacturing a semiconductor device having polysilicon lines with micro-roughness on the surface. The micro-rough surface of the polysilicon lines help produce smaller grain size silicide film during the formation phase to reduce the sheet resistance. The micro-rough surface of the polysilicon lines also increases the effective surface area of the silicide contacting polysilicon lines thereby reduces the overall resistance of the final gate structure after metallization.

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